



lib_locks: Locks for concurrency (README)

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vendor

Xmos

version

2.4.0

scope

General Use

description

Access to hardware and software locks for concurrent C programs

category

General Purpose

keywords

Utility

devices

xcore.ai, xcore-200

1 Summary

This library provides access to hardware and software locks for use in concurrent C programs. However, it is generally not safe to use these for marshaling within XC, due to the assumptions XC makes about safe concurrent data access.

2 Features

- ▶ Hardware locks: fast and power efficient but there are a limited number per tile
- ▶ Software locks: slower but an unlimited number can be used
- ▶ Intertile lock (xcore.ai only): single lock available for guarding chip-wide access to resources



3 Known issues

- ▶ Intertile lock uses a MIPI D-PHY register and so cannot be used when MIPI D-PHY is enabled
- ▶ Intertile lock requires that both tiles are running at the same core frequency. Clocking down one tile may very rarely result in unreliable locking.

4 Development repo

- ▶ [lib_locks](#)

5 Required tools

- ▶ XMOS XTC Tools: 15.3.1

6 Required libraries (dependencies)

- ▶ None

7 Related application notes

- ▶ None

8 Support

This package is supported by XMOS Ltd. Issues can be raised against the software at www.xmos.com/support



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